

## Abstract

A radio communications device includes a transmitter, a receiver, a propagation detecting unit, and a symbol rate setting unit. The receiver has a plurality of antennas, a plurality of transmitting circuits, and a transmission  
20 signal processing circuit. The transmission signal processing circuit has a modulator, and modulates data input transmission data in modulator to output the modulated data as transmission signal to the transmitting circuits. The receiver has a plurality of antennas, a plurality of receiving circuits, and a reception signal processing circuit. The reception signal processing circuit  
25 has a demodulator, demodulates reception signals input from the receiving circuits in demodulator to generate reception data. The propagation detecting unit detects propagation state of radio waves. The symbol rate setting unit selects a symbol to be communicated from a plurality of symbol rates based on the detected propagating state and sets the selected symbol  
30 rate to the modulator and to the demodulator..